

# DART SERVICE INSTRUCTION

TO AMEND INSTALLATION INSTRUCTIONS IIN-D412-742 REV. D  
AND INSTRUCTIONS FOR CONTINUED AIRWORTHINESS ICA-D412-742 REV. 3

REF. CANADIAN STC: SH05-37  
REF. FAA STC: SR01583SE  
REF. EASA STC: EASA.IM.R.S.01126

## PURPOSE:

The purpose of this service instruction is to introduce an alternate wearplate installation for the D412-742-011/-013 Skidtube Installations. The new DSI-9517-011 Wearplate Kit consists of new wearplates and gaskets destined to replace existing D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets. The components in the DSI-9517-011 Wearplate Kit are as defined in the parts list on sheet 4 of this service instruction.

## INSTALLATION PROCEDURE:

Replace D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets with D4095-041/-043 Wearplates Assemblies as follows:

1. Remove existing D3564-1/-3 Wearshoes and D3566-1/-3 Gaskets per Item 32.6.1 of ICA-D412-742. It might be necessary to loosen the aft end of D3564-5 Wearshoe and D3566-5 Gasket.
2. Remove qty.(4) AN4C52A Bolts, D3403-1 Bushings, and qty.(8) D3672-11 Washers as indicated in Figures 1 and 2 of this service instruction.
3. Inspect the skidtube and saddles per Chapter 5 of ICA-D412-742.
4. Seal existing inserts located on both sides of the skidtube in area shown in Figures 1 and 2 of this service instruction using Sikaflex -241/-291 or Proseal 890 or MIL-S-8802 Class 2B sealant.
5. Locate the DSI-9517-011 Wearplate Kit as shown in Figure 1 and 2 of this service instruction.
6. Transfer drill qty.(2) Ø0.438 hole from the skidtube/saddle to the D4095-041/-043 Wearplates Assemblies. Deburr. Touch up finish per Item 5.2.14 of ICA-D412-742 as required.
7. Install the DSI-9517-011 Wearplate Kit using the same AN3C hardware as shown in ICA-D412-742. Torque to 15-25 in-lbs (1.7-2.8 N-m).
8. Install D3403-5 Bushings and AN4C53A Bolts in lieu of D3403-1 Bushings and AN4C52A Bolts removed at step 2 above. Ensure that the nuts on the AN4C Bolts are on the inboard side of the skidtube. Torque to 50-70 in-lbs (5.7-7.9 N-m).
9. Amend weight and balance per the Weight and Balance Table below.

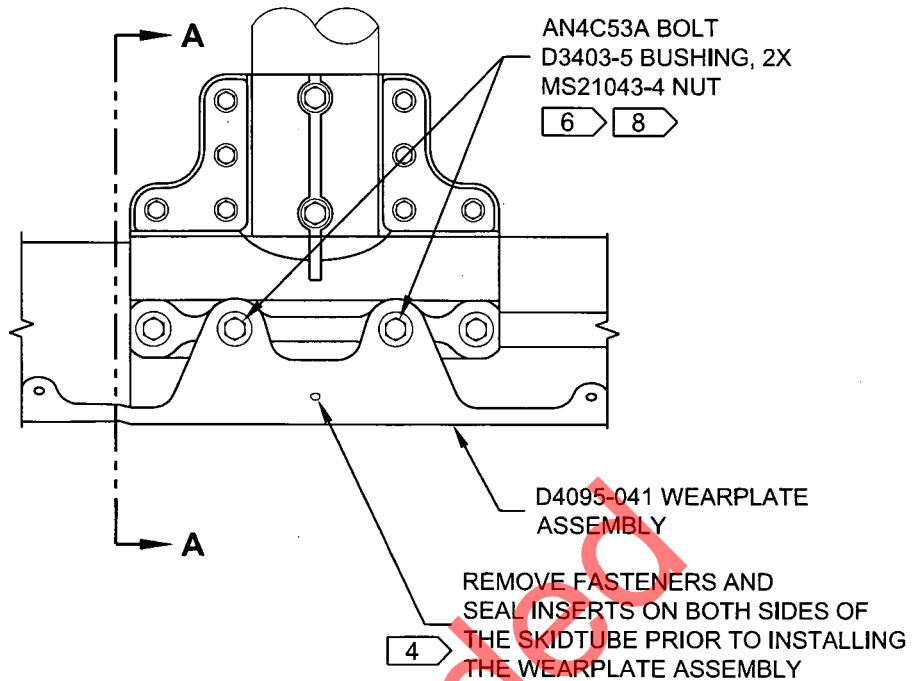
## WEIGHT AND BALANCE:

Use the following weight and balance information for DART D412-742-011/-013 skidtube and saddle installations equipped with DSI-9517-011 Wearplate Kit.

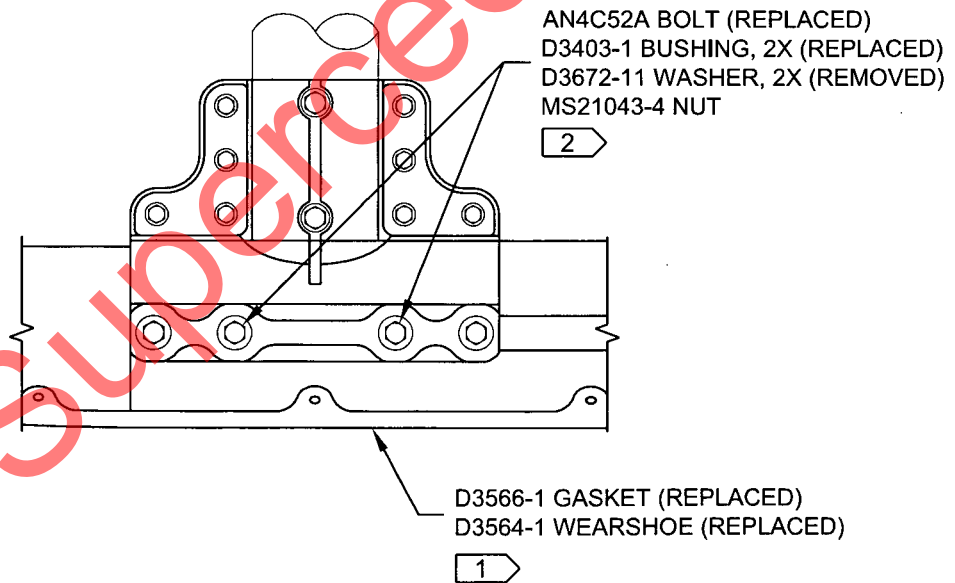
INSTALLATION	WEIGHT	LATERAL		LONGITUDINAL	
		ARM	MOMENT	ARM	MOMENT
<b>D412-742-011</b> <i>Float Skidtube Installation with DSI-9517-011 Kit Installed</i>	70.0 lb 31.8 kg	±55.0 in ±1.40 m	±3850 in-lb ±44.5 m-kG	130 in 3.3 m	9100 in-lb 105 m-kG
<b>D412-742-013</b> <i>Float Skidtube Installation with DSI-9517-011 Kit Installed</i>	70.0 lb 31.8 kg	±55.0 in ±1.40 m	±3850 in-lb ±44.5 m-kG	130 in 3.3 m	9100 in-lb 105 m-kG

A	NEW ISSUE	MB	10.04.21
REV.	DESCRIPTION	BY	DATE
DESIGN	<i>[Signature]</i>	<b>DART AEROSPACE USA, INC</b>	
DRAWN	<i>[Signature]</i>	PORT HADLOCK, WA	
CHECKED	<i>[Signature]</i>	DRAWING NO.	REV. A
MFG. APPR.	N/A	DSI 9517	SHEET 1 OF 6
APPROVED	<i>[Signature]</i>	TITLE	SCALE
DE APPR.	<i>[Signature]</i>	ALTERNATE WEARPLATE KIT	NTS
DATE	10.04.21	COPYRIGHT © 2010 BY DART AEROSPACE USA, INC <small>THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE USA, INC.</small>	






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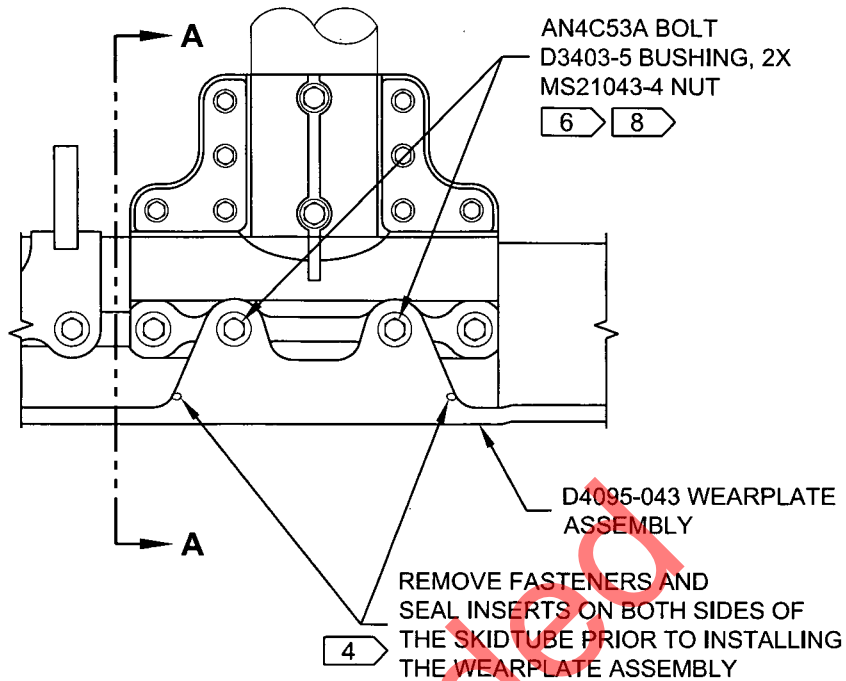
WAS:



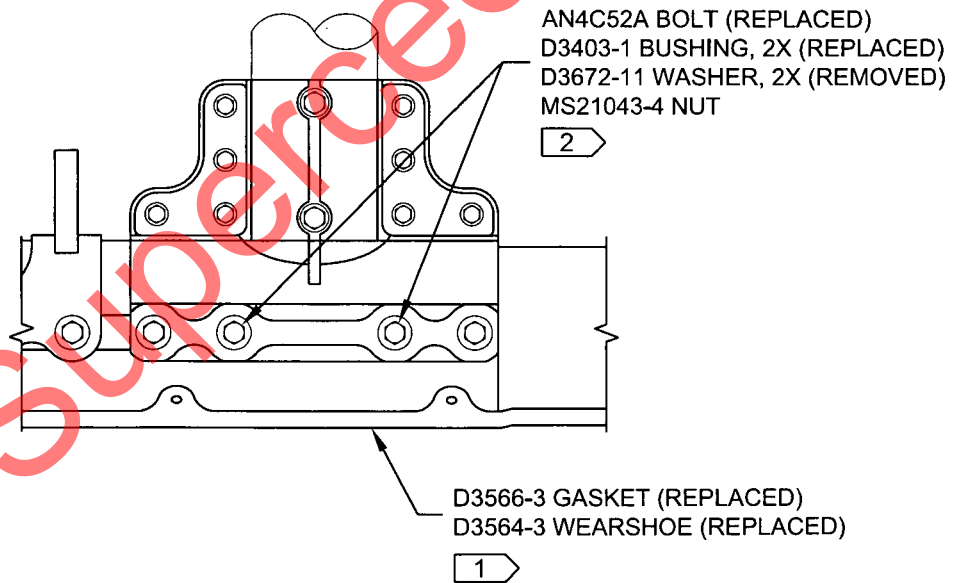
**FIGURE 1: CHANGE AT FORWARD SADDLE LOCATION  
WITH DSI-9517-011 KIT INSTALLED**

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**IS:**

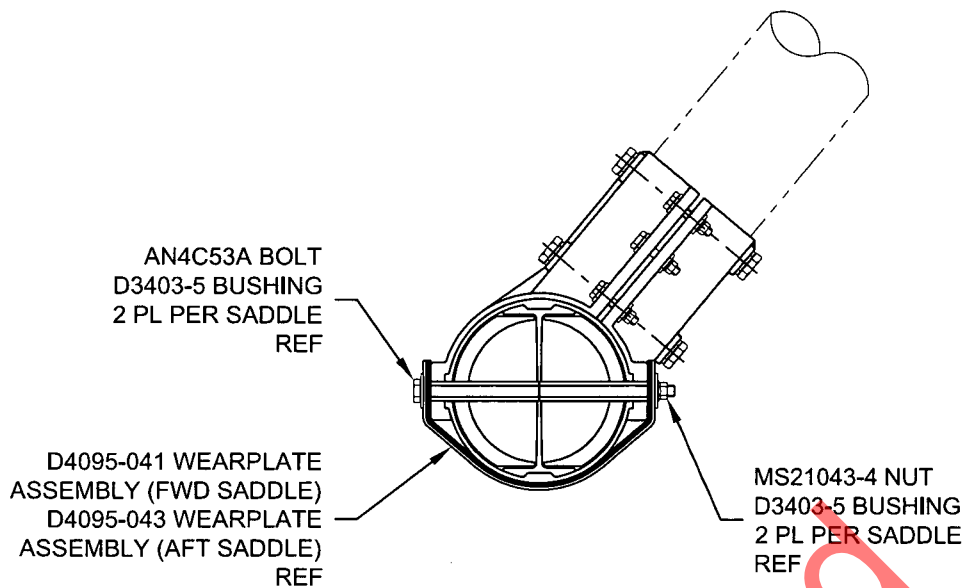


**WAS:**



**FIGURE 2: CHANGE AT AFT SADDLE LOCATION  
WITH DSI-9517-011 KIT INSTALLED**

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### SECTION A-A

#### DSI-9517-011 PARTS LIST:

QTY -011	PART NUMBER	DESCRIPTION
X	DSI-9517-011	WEARPLATE KIT
8	D3403-5	BUSHING
1	D4095-041	WEARPLATE ASSEMBLY
1	D4095-043	WEARPLATE ASSEMBLY
4	AN4C53A	BOLT

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MFG. APPR.	N/A	DSI 9517	SHEET 4 OF 6
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THE PARTS LISTS IN SECTION 32.15 OF ICA-D412-742 (PAGES 53 AND 55) AND SECTION 5.1 OF IIN-D412-742 (PAGES 16 AND 17) ARE AMENDED AS FOLLOWS WHEN OPTIONAL DSI-9517-011 KIT IS INSTALLED:

**32.15 D412-742-011 (PMA/OEM) FLOAT SKIDTUBE INSTALLATION PARTS LIST (ICA-D412-742)**

**5.1 D412-742-011 (PMA/OEM) FLOAT SKIDTUBE INSTALLATION PARTS LIST (IIN-D412-742)**

Item	QTY -011	QTY -041	QTY -015	PART NUMBER	DESCRIPTION
	X			D412-742-011	FLOAT SKIDTUBE INSTALLATION
	1	X		D412-742-041	FLOAT SKIDTUBE
	1		X	D412-742-015	ELECTRIC STEP KIT

**IS:**

3		10		AN3C6A	BOLT (REMOVED QTY.2)
4		4		AN3C7A	BOLT (REMOVED QTY.4)
5		38		AN960C10L	WASHER (REMOVED QTY.6)

21A		1		D4095-041	WEARPLATE ASSEMBLY
21B		*1		*D4096-1 (PART OF D4095-041)	*GASKET (BONDED TO D4095-041, REPLACES D3566-1)
22A		1		D4095-043	WEARPLATE ASSEMBLY
22B		*1		*D4096-3 (PART OF D4095-043)	*GASKET (BONDED TO D4095-043, REPLACES D3566-3)

46	8			D3403-1	BUSHING (REPLACES QTY.4 WITH D3403-5)
46A	8			D3403-5	BUSHING (REPLACES QTY.4 D3403-1)

49	4			AN4C52A	BOLT (REPLACES QTY.4 WITH AN4C53A)
49A	4			AN4C53A	BOLT (REPLACES QTY.4 AN4C52A)

53	8			D3672-11	WASHER (REMOVED QTY.8)
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**WAS:**

3		12		AN3C6A	BOLT
4		8		AN3C7A	BOLT
5		44		AN960C10L	WASHER

21A		1		D3564-1	WEARPLATE
21B		1		D3564-3	WEARPLATE
22A		1		D3566-1	GASKET
22B		1		D3566-3	GASKET

46	16			D3403-1	BUSHING
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49	8			AN4C52A	BOLT
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53	16			D3672-11	WASHER
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\*BONDING IS ACHIEVED USING 3M 1300/ 1300L SCOTCH GRIP ADHESIVE.

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MFG. APPR.	N/A	DSI 9517	SHEET 5 OF 6
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THE PARTS LISTS IN SECTION 32.16 OF ICA-D412-742 (PAGES 57 AND 59) AND SECTION 5.2 OF IIN-D412-742 (PAGES 18 AND 19) ARE AMENDED AS FOLLOWS WHEN OPTIONAL DSI-9517-011 KIT IS INSTALLED:

**32.16 D412-742-013 (APICAL TRI-BAG) FLOAT SKIDTUBE INSTALLATION PARTS LIST (ICA-D412-742)**  
**5.2 D412-742-013 (APICAL TRI-BAG) FLOAT SKIDTUBE INSTALLATION PARTS LIST (IIN-D412-742)**

Item	QTY -013	QTY -043	PART NUMBER	DESCRIPTION
	X		D412-742-013	FLOAT SKIDTUBE INSTALLATION
	1	X	D412-742-043	FLOAT SKIDTUBE

**IS:**

3		10	AN3C6A	BOLT (REMOVED QTY.2)
4		4	AN3C7A	BOLT (REMOVED QTY.4)
5		38	AN960C10L	WASHER (REMOVED QTY.6)

21A	1		D4095-041	WEARPLATE ASSEMBLY
21B	*1		*D4096-1 (PART OF D4095-041)	*GASKET (BONDED TO D4095-041, REPLACES D3566-1)
22A	1		D4095-043	WEARPLATE ASSEMBLY
22B	*1		*D4096-3 (PART OF D4095-043)	*GASKET (BONDED TO D4095-043, REPLACES D3566-3)

46	8		D3403-1	BUSHING (REPLACES QTY.4 WITH D3403-5)
46A	8		D3403-5	BUSHING (REPLACES QTY.4 D3403-1)

49	4		AN4C52A	BOLT (REPLACES QTY.4 WITH AN4C53A)
49A	4		AN4C53A	BOLT (REPLACES QTY.4 AN4C52A)

53	8		D3672-11	WASHER (REMOVED QTY.8)
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**WAS:**

3		12	AN3C6A	BOLT
4		8	AN3C7A	BOLT
5		44	AN960C10L	WASHER

21A		1	D3564-1	WEARPLATE
21B		1	D3564-3	WEARPLATE
22A		1	D3566-1	GASKET
22B		1	D3566-3	GASKET

46	16		D3403-1	BUSHING
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49	8		AN4C52A	BOLT
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53	16		D3672-11	WASHER
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\*BONDING IS ACHIEVED USING 3M 1300/ 1300L SCOTCH GRIP ADHESIVE.

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MFG. APPR.	N/A	DSI 9517	SHEET 6 OF 6
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